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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,995	11/06/2001	Bang Mo Kim	RD-27684	4683

6147 7590 10/03/2003

GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH CENTER
PATENT DOCKET RM. 4A59
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EXAMINER

GAKH, YELENA G

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/682,995

Applicant(s)

KIM ET AL.

Examiner

Yelena G. Gakh, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) 29-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-28, drawn to a method of reducing wastes, classified in class 700, subclass 266.
 - II. Claims 29-44, drawn to a waste management system, classified in class 422, subclass 129.
 - III. Claims 45-67, drawn to a computer program, classified in class 709, subclass 310.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II, III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the method can be practiced with the apparatus that does not comprise a Waste Reduction module; it can be practiced with several computer programs, rather than one.

Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different functions and different effects, i.e. the invention of Group II is a waste management system comprising a source producing a pollutant and a source discharging an effluent, while the invention of Group III is a computer software.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

2. During a telephone conversation with Andrew Caruso on 09/129/03 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-28.

Affirmation of this election must be made by applicant in replying to this Office action. Claims

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29-67 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

3. Claims 2-23 and 26-28 are objected to as reciting the method of claim 1 in indefinite form: the claims should recite “the method ... according to claim 1”.

Specification

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention

The specification is objected to as not being written in such full, clear, concise and exact terms as to enable anyone of ordinary skill in the art to practice the invention in its best mode. The specification indicates that a Waste Reduction module “predicts, or estimates, process parameters that may reduce wastes produced by the industrial process”; however, no disclosure is given on how this Waste Reduction module really works, and how the processes can be optimized for all possible industrial processes with outputs of multiple hazardous materials. It is not clear, how the Waste Reduction module treats information from different sources even for the same process, e.g. if it integrates all information independent on particular capabilities of a specific plant, etc. No working model for any of such process is disclosed and no examples demonstrating how such model can be used for predicting parameters to be optimized for reducing the wastes are represented. It is even less clear as to how the Waste Reduction module can handle multiple models for multiple processes using data from multiple sources, when the multiple sources (e.g. plants) for even the same process have their own specific capabilities, or when there are multiple processes leading to the same waste materials? Would it be an

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optimization of the parameters for a specific process for a specific plant, or for all plants employing such process?

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The Nature of the Invention

The invention is drawn to "a method of reducing wastes". However, no actual methods or ways of reducing wastes are disclosed in the specification. The disclosure is related to collecting and distributing information regarding industrial processes. No reasonable suggestions or guidance on how to use this information for reducing the wastes are given in the specification.

The State of the Prior Art and the Level of Predictability in the Art

The prior art discloses monitoring hazardous and toxic waste using corresponding detectors, and collecting information from various locations on the central processor, as e.g. in Bell (US 4,867,604), Speranza (US 5,206,818), Carew (US 5,325,605), Taylor (US 5,373,160 and 5,451,787), Malone (US 5,425,316), Stedman et al. (US 5,498,872), Embutsu et al. (US 5,699,525) Jaidka (US 5,606,495), Orr et al. (US 5,808,916, Izumi et al. (JP 403001699 A), Nishi et al. (JP02001114402 A) and Elokhn (RU 2147137 C1); or it discloses methods of reducing wastes by employing corresponding physical and chemical processes for destroying

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wastes, as disclosed by e.g. Gloster et al. (US 3,810,542), Von Klenck (US 3,859,933), Chappell (US 3,963,637), Falbesaner et al. (US 4,234,422) and DE 29912126U1. The prior art does not predict the ways of reducing wastes by collecting information on the output of industrial process and transforming it through the local or global network.

No working examples for the claimed method are represented in the specification.

The method claimed is not enabled by the disclosure and therefore cannot be used by anyone of ordinary skill in the art.

6. Claims 25-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not disclose how it is possible to acquire process information concerning industrial process from a globally distributed computing network, with information concerning specific parameters, such as concentration of chemical species used in the process, pollutants emitted by the process, flow rates, etc., when these parameters are closely related to the production scales of the plants and can be very specific for a given plant. The specification does not disclose, how it is possible to gather information globally – is it gathered from all possible plants employing a specific process? How should this information be represented – specifically for each plant, as an average number, as a total sum for all plants, etc.? The specification does not enable anyone of ordinary skill in the art to practice the method the way it is disclosed, as no ways for presenting such information, as well as no specific description of what this information should be, are indicated in the specification.

Conclusion

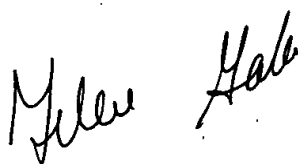
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yelena G. Gakh, Ph.D. whose telephone number is (703) 306-5906. The examiner can normally be reached on 9:30 am - 6:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (703) 308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Yelena G. Gakh
9/22/03

Handwritten signature of Yelena G. Gakh in cursive script.